

REMARKS

Claims 1, 3, 5 and 7-11 now stand in the present application, claims 1, 3 and 5 having been amended, claims 2, 4 and 6 having been canceled and new claims 7-11 having been added. Reconsideration and favorable action is respectfully requested in view of the above amendments and the following remarks.

In the Office Action, the Examiner has rejected claim 2 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In rejecting claim 2 the Examiner cites Ex Parte Wu.

The Examiner's rejection of claim 2 is not understood, since the cited case contradicts an indefiniteness rejection in that it did not sustain the § 112 rejection because the language employed in the claim at issue was deemed to be definite. The only mention of indefinite language in the cited case is in the key note portion, before the reported case, which strictly speaking is not a part of the decided case. In that key note portion it is stated that "such as" language may be indefinite. However, present claim 2 does not contain "such as" language. Indeed, the language cited in present claim 2 is specific and definite similarly to the language used in the claim at issue in Ex Parte Wu which was found to be definite.

In any event, in order to further the prosecution of this case, Applicants have rewritten claim 2 as new independent claim 7 and have omitted the language objectionable to the Examiner. Accordingly, the Examiner's § 112 rejection of canceled claim 2 is moot.

The Examiner has also rejected claims 1-3, 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Hamaguchi et al. in view of Abe et al. and has rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over the previously cited references and Kotani et al. In view of the above-described claim amendments, the Examiner's § 103 rejections of the claims are believed to have been overcome, as will be described in greater detail below.

As noted above, Applicants have amended claim 1 by incorporating the features of claims 4 and 6 therein so as to claim a honeycomb structural body having the pore volume of its partition walls of at least 30% and the average roughness R_z of the surface of partition walls of 1-5 μm to attain a high cell density of 600 cells/in² or greater as well as an excellent catalyst loading property. Newly added independent claim 7 is of similar scope except for claiming a narrower range of pore volume, namely, 35% to 80%.

Hamaguchi et al. and Abe et al. fail to disclose "the average roughness R_z of the surface of partitions walls of 1-5 μm " which is a key feature of Applicants' invention.

Kotani et al. discloses "the surface roughness of the surface of partitions walls." However, Kotani et al. relates to a very different device, namely a filter suitable for removing particulates (soot) from the exhaust of a diesel engine. The surface roughness is defined to improve the particulate trapping efficiency. See cited reference at column 1, lines 1-5 and column 2, lines 21-31.

On the contrary, Applicants' invention relates to a honeycomb structural body which has through-holes downstream and which is not used to filter particulates such as soot. Further, the present invention defines the average roughness as well as the pore

volume so as to improve the catalyst loading amount, which is a teaching far removed from Kotani et al.

Since Hamaguchi et al. and Abe et al. are very different in their objectives and problems to be solved as compared to Kotani et al., it is respectfully submitted that one of ordinary skill in the art would not have been motivated to combine the references in the manner suggested by the Examiner. Accordingly, claim 1 and its respective dependent claims 3 and 5 are believed to patentably define over the cited references.

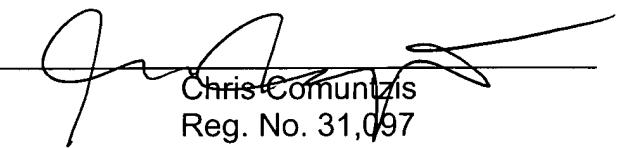
As noted above, claim 7 represents claim 2 written in independent form. Since newly added independent claim 7 also includes the features of original claims 4 and 6, claim 7 is believed to patentably define over the combination of cited art for the same reasons given above with respect to amended claim 1. Accordingly, claim 7 and its respective dependent claims 8, 9 and 11, are also believed to patentably define over the combined references.

Therefore, in view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all of claims 1, 3, 5 and 7-11, standing in the application, be allowed and that the case be passed to issue. If there are any other issues remaining which the Examiner believes could be resolved through either a supplemental response or an Examiner's amendment, the Examiner is respectfully requested to contact the undersigned at the local telephone exchange indicated below.

Attached hereto is a marked-up version of the changes made to the specification and claim(s) by the current amendment. The attached page(s) is captioned "Version With Markings To Show Changes Made."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (Amended) A honeycomb structural body comprising a plurality of cells formed by providing partition walls composed mainly of cordierite, which has the chemical composition SiO_2 : 45-55 wt%, Al_2O_3 : 33-42 wt%, MgO : 12-18 wt%, in a honeycomb fashion,

the honeycomb structural body [being characterized in that said] having a cell density [is] of at least 600 cells/in², [and the] a pore volume of said partition walls [is] being at least 30%, an average roughness R_z of the surface of said partition walls being 1-5 μm , and said honeycomb structural body being a catalyst carrier having a catalyst loaded on the surface of said partition walls.

3. (Amended) A honeycomb structural body according to claim 1, [characterized in that the] wherein a thickness of said partition walls [is] being no greater than 80 μm .

5. (Amended) A honeycomb structural body according to claim 1, [characterized in that the] wherein a mean size of [the] fine pores formed inside said partition walls [is] being 1-10 μm .

VERSION WITH MARKINGS TO SHOW CHANGES MADE

ABSTRACT OF THE DISCLOSURE

There is provided a honeycomb structural body with a high cell density of 600 cells/in² or greater and excellent catalyst loading properties. In a honeycomb structural body [1] comprising a plurality of cells formed by providing partition walls [10] composed mainly of cordierite, which has the chemical composition SiO₂: 45-55 wt%, Al₂O₃: 33-42%, MgO: 12-18 wt%, in a honeycomb fashion, the density of the cells [15] is at least 600 cells/in² and the pore volume of the partition walls [10] is at least 30%.